



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,693	09/04/2003	Bob McGuire	15912/09032	8575

27530 7590 12/06/2005

NELSON MULLINS RILEY & SCARBOROUGH, LLP
1320 MAIN STREET, 17TH FLOOR
COLUMBIA, SC 29201 .

EXAMINER

GAY, JENNIFER HAWKINS

ART UNIT	PAPER NUMBER
----------	--------------

3672

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/656,693	Applicant(s) MCGUIRE ET AL.	
	Examiner Jennifer H. Gay	Art Unit 3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-18 and 20-24 is/are allowed.
- 6) ☒ Claim(s) 19 and 25-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/31/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 28 is objected to because of the following informalities: in line 5, "a flange" should be changed to --the flange--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 19, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Betchan et al. (US 5,388,639) in view of Donald et al. (US 6,637,514).

Regarding claim 19: Betchan et al. discloses a method for use in a wellbore. The method involves the following steps:

- Securing an independent screwed wellhead **2** to a surface casing for the wellbore.
- Attaching a flange **12** to the wellhead such that a fluid seal is formed therebetween.

Betchan et al. discloses all of the limitations of the above claims except for using the method and apparatus to drill a wellbore. However, as Betchan et al. is used to rotate tubing in the wellbore, the apparatus is considered completely capable of being used during a drilling process. Therefore, it would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have used the method and apparatus of Betchan et al. to drill a wellbore as the apparatus would have provided a means for sealing the wellbore while rotating the drill string and bit. This would have reduced the amount of equipment necessary to drill the wellbore.

Betchan et al. also fails to disclose a metal-to-metal seal between the wellhead and flange. The seal of Betchan et al. is an o-ring.

Donald et al. discloses a wellhead. Donald et al. further teaches that it is well known in the art to use either o-rings or metal-to-metal seals to seal between components of the wellhead (2:37-42).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have used a metal-to-metal seal to form a fluid seal between the wellhead and flange of Betchan et al., since the examiner takes Official Notice of the equivalence of o-rings and metal-to-metal seals for their use in the wellhead art and the selection of any of these known equivalents to form the seal between the wellhead and flange would be within the level of ordinary skill in the art as evidenced by Donald et al.

Regarding claim 25: Betchan et al. discloses an independent screwed wellhead 2 that includes the following features:

- A top end for mating with a bottom end of a flange 12 to be mounted thereto.
- An annular groove located in the bottom end of the flange (Figure 1) for receiving an o-ring to provide a fluid seal between the wellhead and flange.

Betchan et al. discloses all of the limitations of the above claims except for the annular groove being located on the top end of the wellhead and except for the seal being a metal-to-metal seal.

While Betchan et al. does not disclose the annular groove being located on the top end of the wellhead, it would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have formed the annular groove taught by Betchan et al. on the top end of the wellhead instead of on the mating bottom surface of the flange, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

Donald et al. discloses a wellhead. Donald et al. further teaches that it is well known in the art to use either o-rings or metal-to-metal seals to seal between components of the wellhead (2:37-42).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have used a metal-to-metal seal to form a fluid seal between the wellhead and flange of Betchan et al., since the examiner takes Official Notice of the equivalence of o-rings and metal-to-metal seals for their use in the wellhead art and the selection of any of these known equivalents to form the seal between the wellhead and flange would be within the level of ordinary skill in the art as evidenced by Donald et al.

Regarding claim 26: Betchan et al. further teaches that the flange includes a peripheral annular shoulder for rotatably supporting a lockdown nut 4 for securing the flange to the wellhead.

4. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Betchan et al. in view of Donald et al. as applied to claim 25 above, and further in view of Dallas et al. (US 2004/0231856).

Betchan et al. and Donald et al. disclose all of the limitations of the above claims except for the inner sidewall of the wellhead including a radial groove in which an o-ring is placed to form a seal with a sidewall of the flange.

Dallas et al. discloses a wellhead similar to that of Betchan et al. Dallas et al. further teaches a flange 50 that includes annular grooves containing o-rings 68 on the sidewall thereof. The grooves cooperate with the sidewall of a wellhead 20 for form a seal therebetween.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the apparatus of Betchan et al. in view of Donald et al. such that the sidewalls of the flange and wellhead were in engagement with one another and included o-rings seals therebetween as taught by Dallas et al. in order to have formed a further fluid seal between the wellhead and flange thus increasing the pressure tolerance of the apparatus.

5. Claims 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dallas et al. in view of Donald et al.

Regarding claim 28: Dallas et al. discloses an independent screwed wellhead **20** that includes the following features:

- A top end for mating engagement with a bottom end of a flange **50** to be mounted thereto.
- A machined surface (Figure 3a) for mating with a complementary frusto-conical surface of the flange.
- A seal **68** between the wellhead and flange.

Betchan et al. discloses all of the limitations of the above claims except for the seal being a metal-to-metal seal.

Donald et al. discloses a wellhead. Donald et al. further teaches that it is well known in the art to use either o-rings or metal-to-metal seals to seal between components of the wellhead (2:37-42).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have used a metal-to-metal seal to form a fluid seal between the wellhead and flange of Betchan et al., since the examiner takes Official Notice of the equivalence of o-rings and metal-to-metal seals for their use in the wellhead art and the selection of any of these known equivalents to form the seal between the wellhead and flange would be within the level of ordinary skill in the art as evidenced by Donald et al.

Regarding claim 29: Dallas et al. and Donald et al. discloses all of the limitations of the above claims except for the angle of the frusto-conical surface being offset from an axial plane of the wellhead by 4°–10°. However, it would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have formed the frusto-conical surfaces of Dallas et al. with an angel that was offset from an axial plane of the wellhead by 4°–10°, since it has been held that discovering an optimum value of a

Art Unit: 3672

result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claim 30: The apparatus of Dallas et al. includes annular grooves formed in the sidewall of the flange that include o-rings 68 to provide a fluid seal with the inner sidewall of the wellhead.

Allowable Subject Matter

6. The indicated allowability of claim 19 is withdrawn in view of the newly discovered reference(s) to Betchan et al. Rejections based on the newly cited reference(s) are given above.

7. Claims 2-18 and 20-24 are allowed.

Response to Arguments

8. In view of applicant's amendment, the objections to the drawings and claims have been withdrawn.

9. Applicant's arguments with respect to claims 2-30 have been considered but are moot in view of the new ground(s) of rejection.

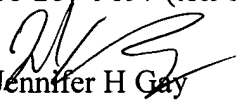
Conclusion

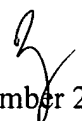
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer H. Gay whose telephone number is (571) 272-7029. The examiner can normally be reached on Monday-Thursday, 6:30-4:00 and Friday, 6:30-1:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3672

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jennifer H. Gay
Primary Examiner
Art Unit 3672

JHG 
December 2, 2005